FIG. 1

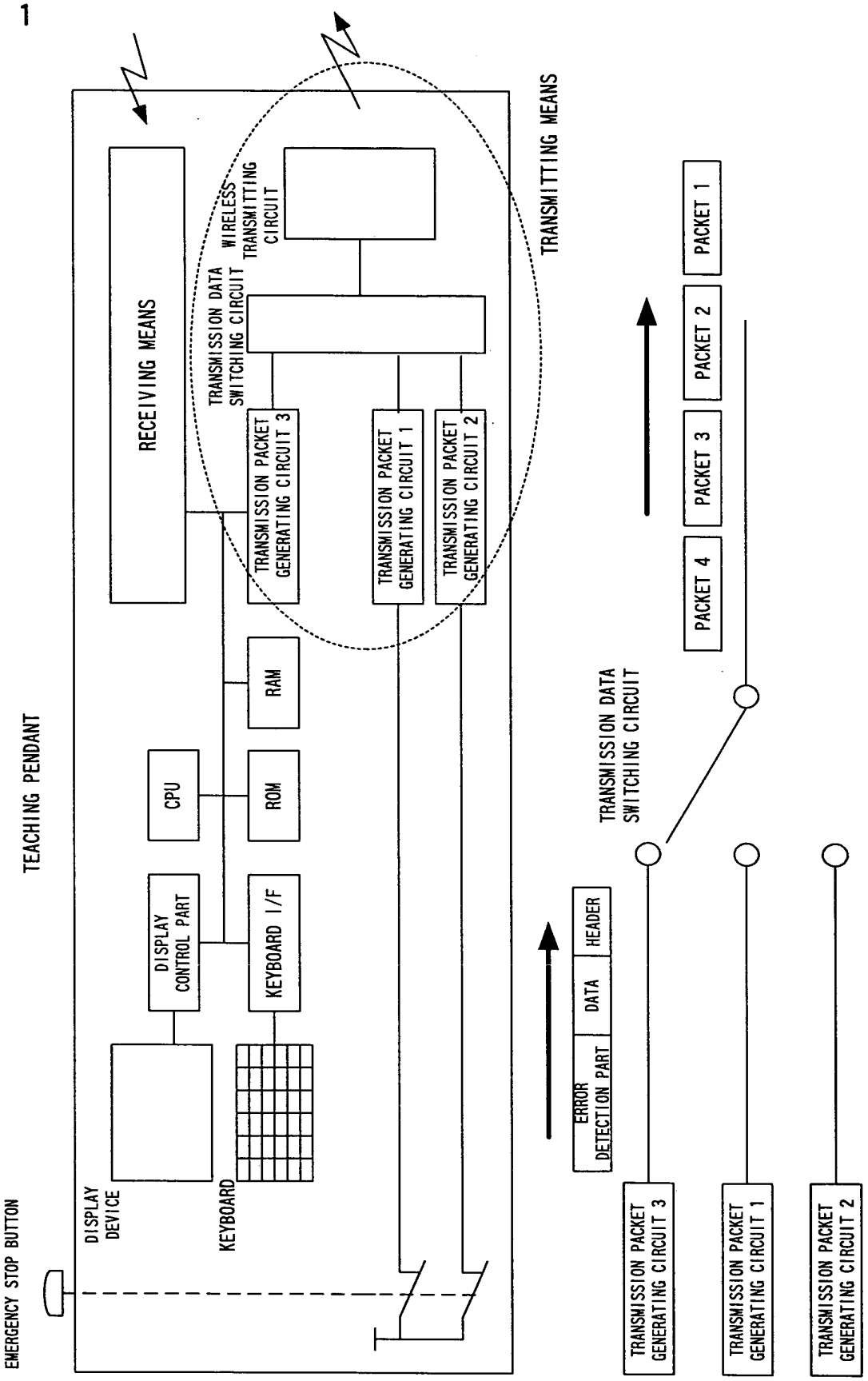

TEACHING PENDANT
EMERGENCY STOP BUTTON
DISPLAY DEVICE
KEYBOARD
DISPLAY CONTROL PART
KEYBOARD I/F
CPU
ROM
RAM
RECEIVING MEANS
TRANSMISSION DATA SWITCHING CIRCUIT
WIRELESS TRANSMITTING CIRCUIT
TRANSMISSION PACKET GENERATING CIRCUIT 3
TRANSMISSION PACKET GENERATING CIRCUIT 1
TRANSMISSION PACKET GENERATING CIRCUIT 2
TRANSMITTING MEANS
HEADER
DATA
ERROR DETECTION PART
TRANSMISSION DATA SWITCHING CIRCUIT
PACKET 4
PACKET 3
PACKET 2
PACKET 1
TRANSMISSION PACKET GENERATING CIRCUIT 3
TRANSMISSION PACKET GENERATING CIRCUIT 1
TRANSMISSION PACKET GENERATING CIRCUIT 2

FIG. 2

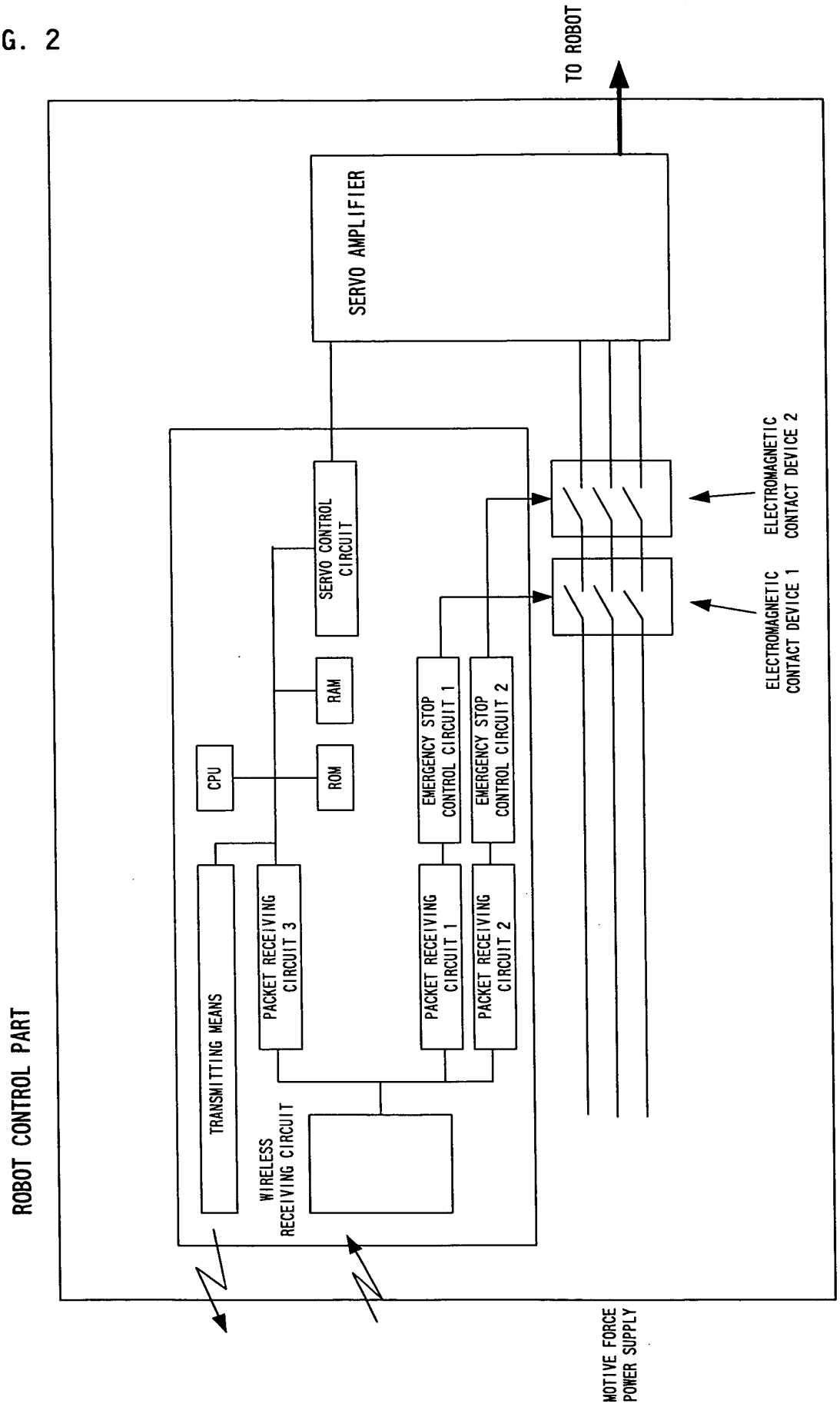

TO ROBOT
SERVO AMPLIFIER
ELECTROMAGNETIC CONTACT DEVICE 2
ELECTROMAGNETIC CONTACT DEVICE 1
SERVO CONTROL CIRCUIT
RAM
ROM
CPU
EMERGENCY STOP CONTROL CIRCUIT 1
EMERGENCY STOP CONTROL CIRCUIT 2
PACKET RECEIVING CIRCUIT 3
PACKET RECEIVING CIRCUIT 1
PACKET RECEIVING CIRCUIT 2
TRANSMITTING MEANS
WIRELESS RECEIVING CIRCUIT
ROBOT CONTROL PART
MOTIVE FORCE POWER SUPPLY

FIG. 3

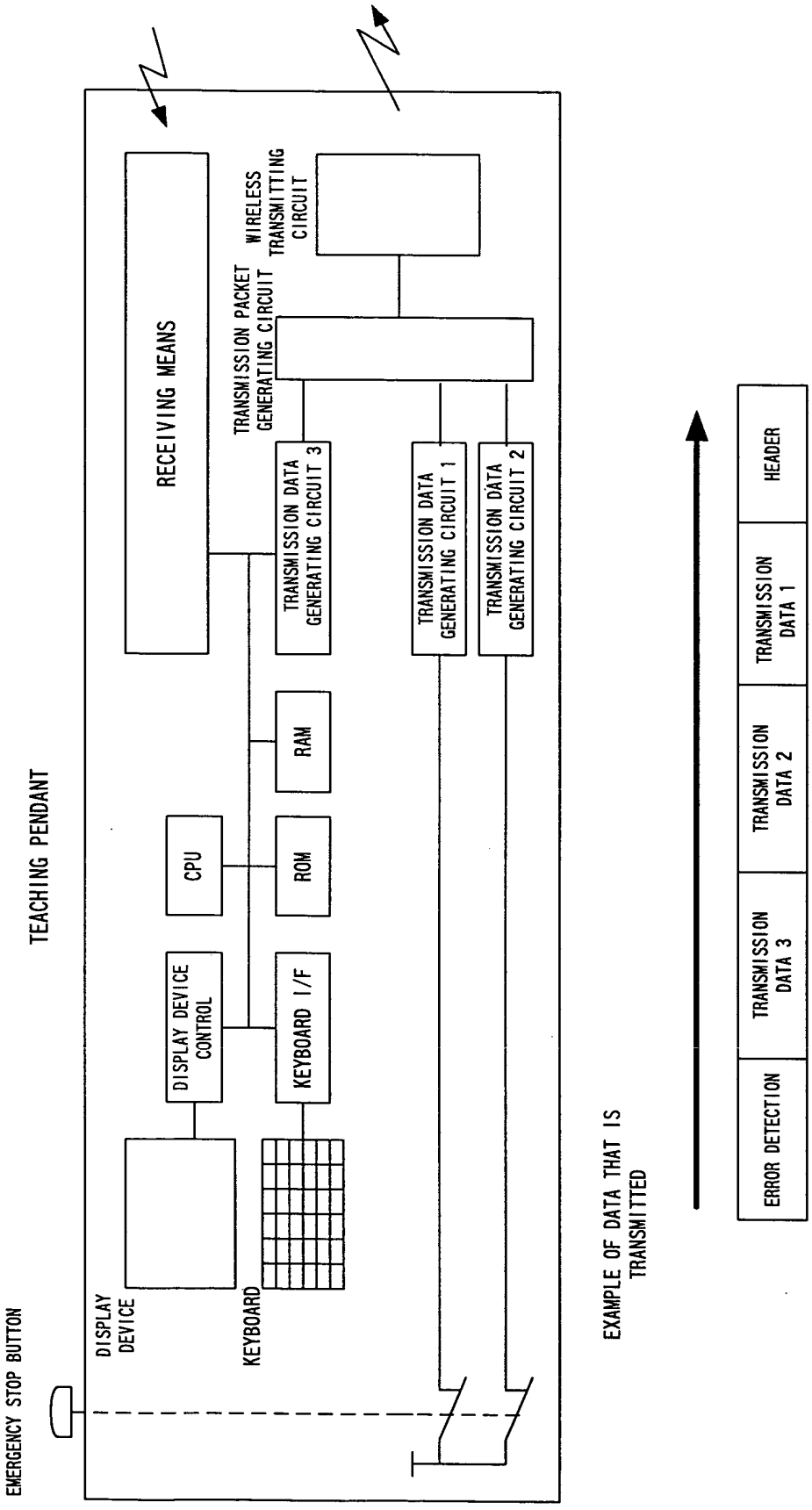

TEACHING PENDANT
RECEIVING MEANS
WIRELESS TRANSMITTING CIRCUIT
TRANSMISSION PACKET GENERATING CIRCUIT
TRANSMISSION DATA GENERATING CIRCUIT 3
TRANSMISSION DATA GENERATING CIRCUIT 1
TRANSMISSION DATA GENERATING CIRCUIT 2
RAM
ROM
CPU
DISPLAY DEVICE CONTROL
KEYBOARD I/F
DISPLAY DEVICE
KEYBOARD
EMERGENCY STOP BUTTON
EXAMPLE OF DATA THAT IS TRANSMITTED
HEADER
TRANSMISSION DATA 1
TRANSMISSION DATA 2
TRANSMISSION DATA 3
ERROR DETECTION

FIG. 4

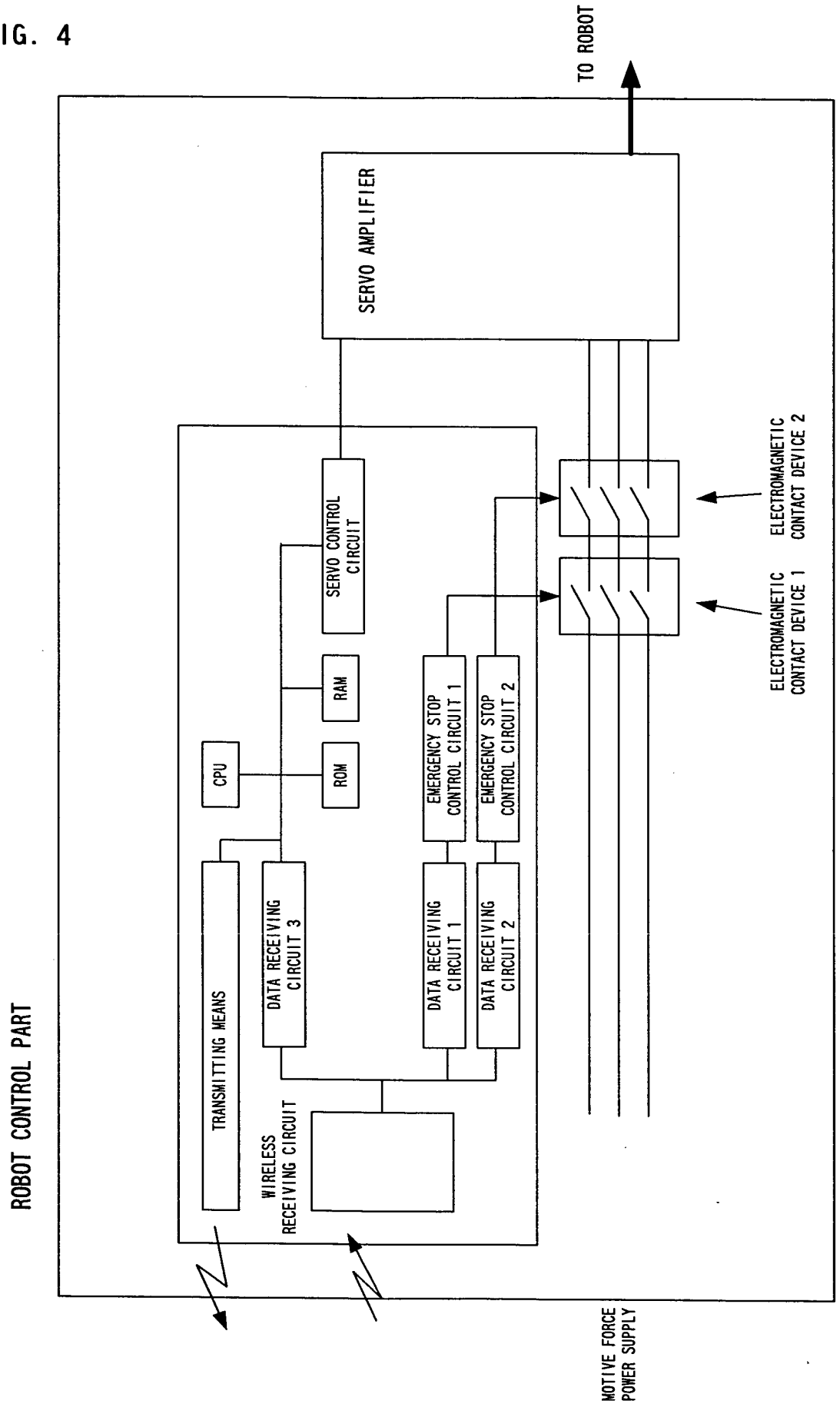

ROBOT CONTROL PART
TO ROBOT
SERVO AMPLIFIER
SERVO CONTROL CIRCUIT
RAM
ROM
CPU
EMERGENCY STOP CONTROL CIRCUIT 1
EMERGENCY STOP CONTROL CIRCUIT 2
DATA RECEIVING CIRCUIT 3
DATA RECEIVING CIRCUIT 1
DATA RECEIVING CIRCUIT 2
TRANSMITTING MEANS
WIRELESS RECEIVING CIRCUIT
ELECTROMAGNETIC CONTACT DEVICE 1
ELECTROMAGNETIC CONTACT DEVICE 2
MOTIVE FORCE POWER SUPPLY

FIG. 5

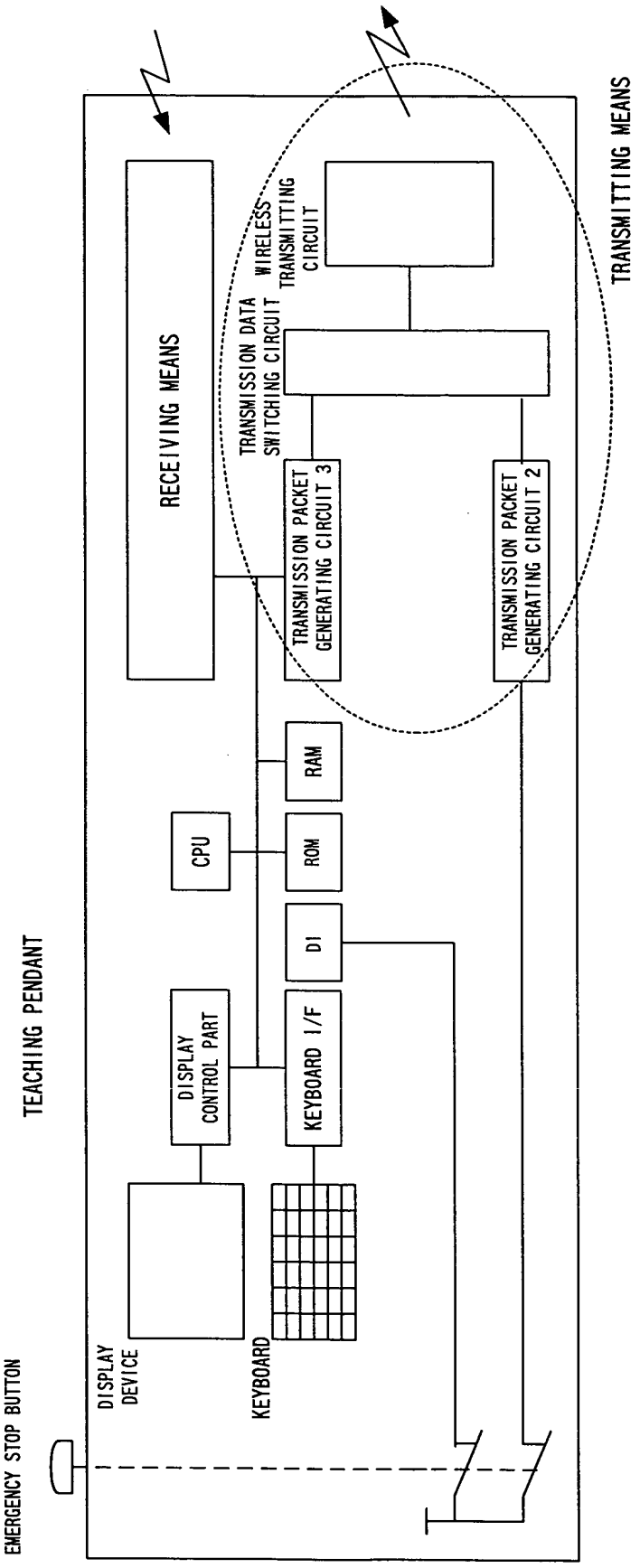

TRANSMITTING MEANS
WIRELESS TRANSMITTING CIRCUIT
TRANSMISSION DATA SWITCHING CIRCUIT
RECEIVING MEANS
TRANSMISSION PACKET GENERATING CIRCUIT 3
TRANSMISSION PACKET GENERATING CIRCUIT 2
RAM
CPU
ROM
DI
DISPLAY CONTROL PART
KEYBOARD I/F
TEACHING PENDANT
DISPLAY DEVICE
KEYBOARD
EMERGENCY STOP BUTTON

FIG. 6

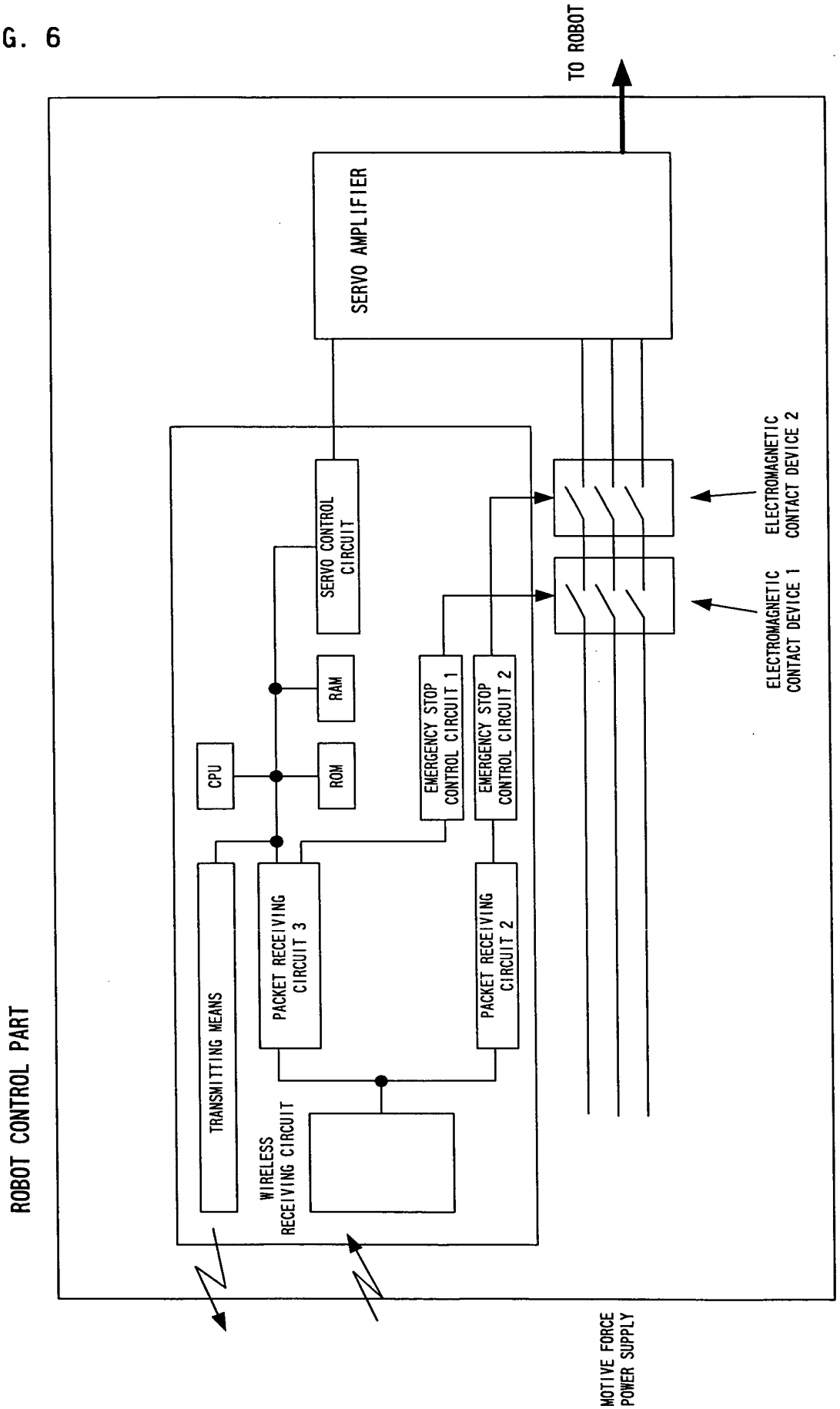

ROBOT CONTROL PART
TO ROBOT
SERVO AMPLIFIER
SERVO CONTROL CIRCUIT
RAM
ROM
CPU
EMERGENCY STOP CONTROL CIRCUIT 1
EMERGENCY STOP CONTROL CIRCUIT 2
ELECTROMAGNETIC CONTACT DEVICE 2
ELECTROMAGNETIC CONTACT DEVICE 1
TRANSMITTING MEANS
PACKET RECEIVING CIRCUIT 3
PACKET RECEIVING CIRCUIT 2
WIRELESS RECEIVING CIRCUIT
MOTIVE FORCE POWER SUPPLY

FIG. 7

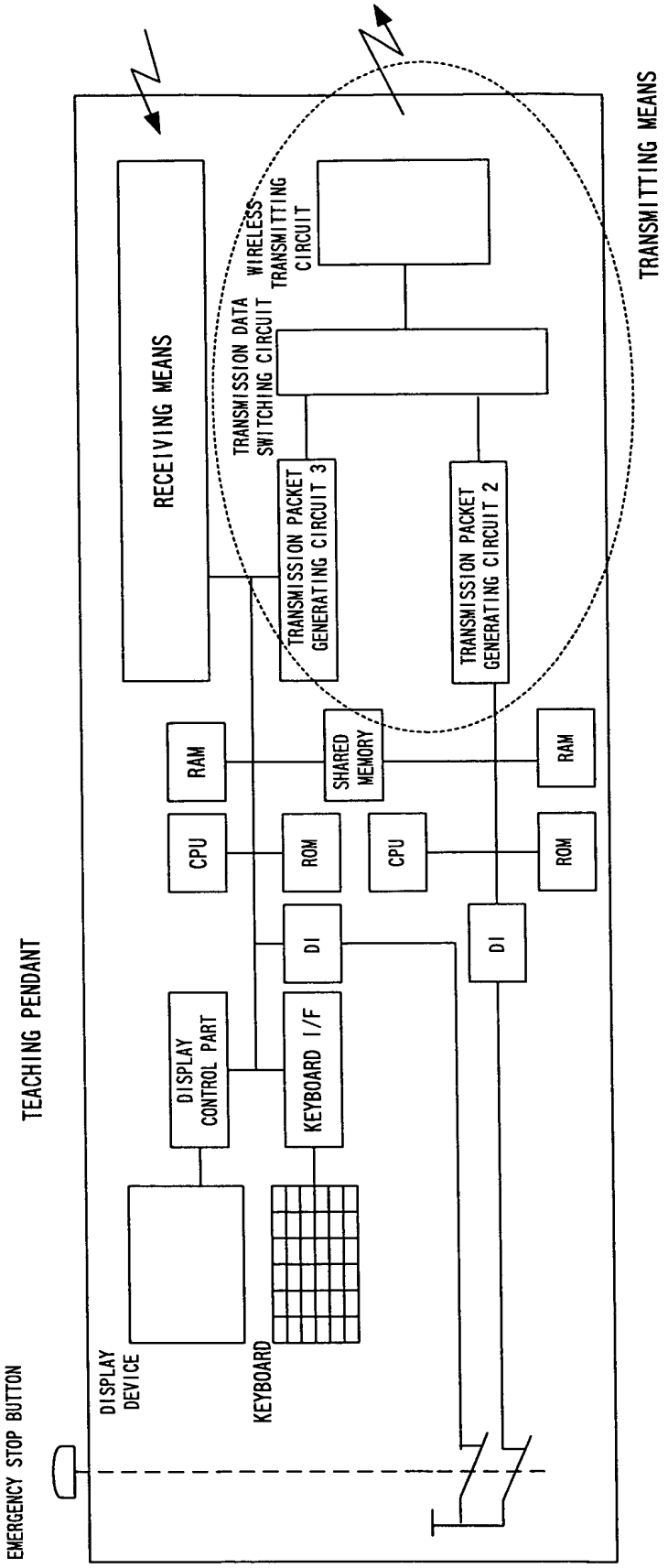

TRANSMITTING MEANS
WIRELESS TRANSMITTING CIRCUIT
TRANSMISSION DATA SWITCHING CIRCUIT
RECEIVING MEANS
TRANSMISSION PACKET GENERATING CIRCUIT 3
TRANSMISSION PACKET GENERATING CIRCUIT 2
SHARED MEMORY
RAM
RAM
CPU
ROM
CPU
ROM
DI
DI
DISPLAY CONTROL PART
KEYBOARD I/F
TEACHING PENDANT
DISPLAY DEVICE
KEYBOARD
EMERGENCY STOP BUTTON

FIG. 8

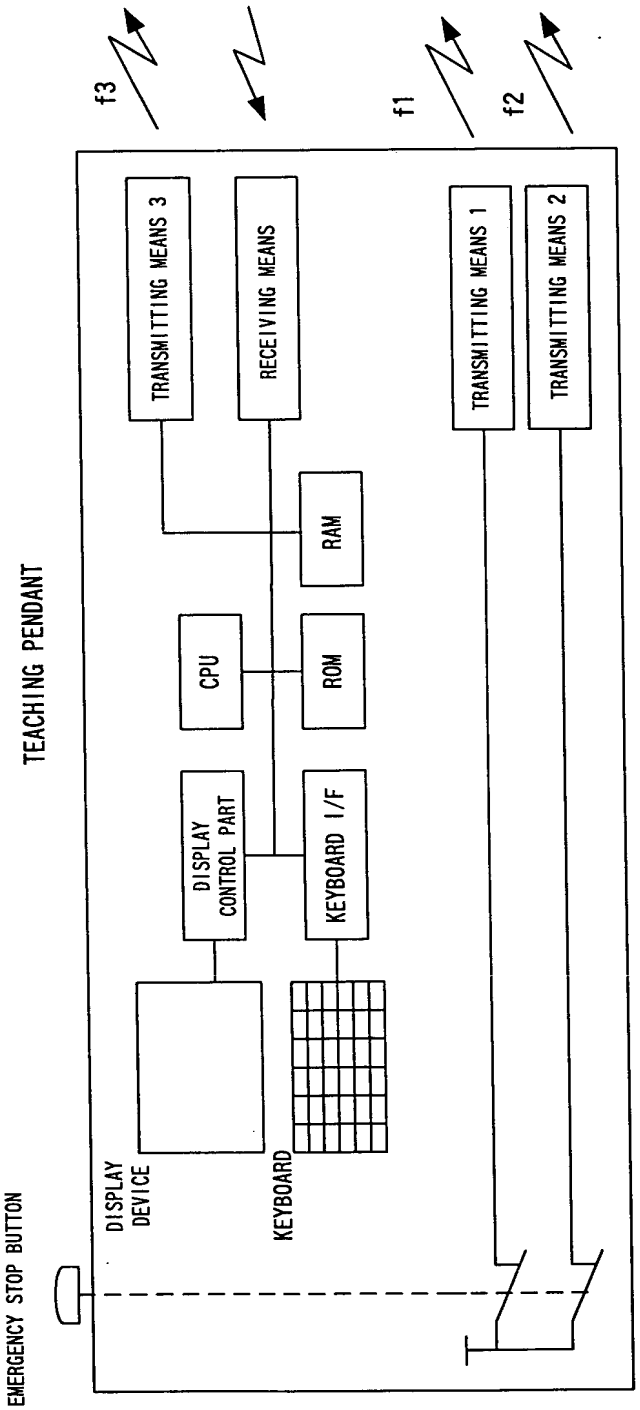

f3
f1
f2
TRANSMITTING MEANS 3
RECEIVING MEANS
TRANSMITTING MEANS 1
TRANSMITTING MEANS 2
RAM
CPU
ROM
DISPLAY CONTROL PART
KEYBOARD I/F
TEACHING PENDANT
DISPLAY DEVICE
KEYBOARD
EMERGENCY STOP BUTTON

FIG. 9

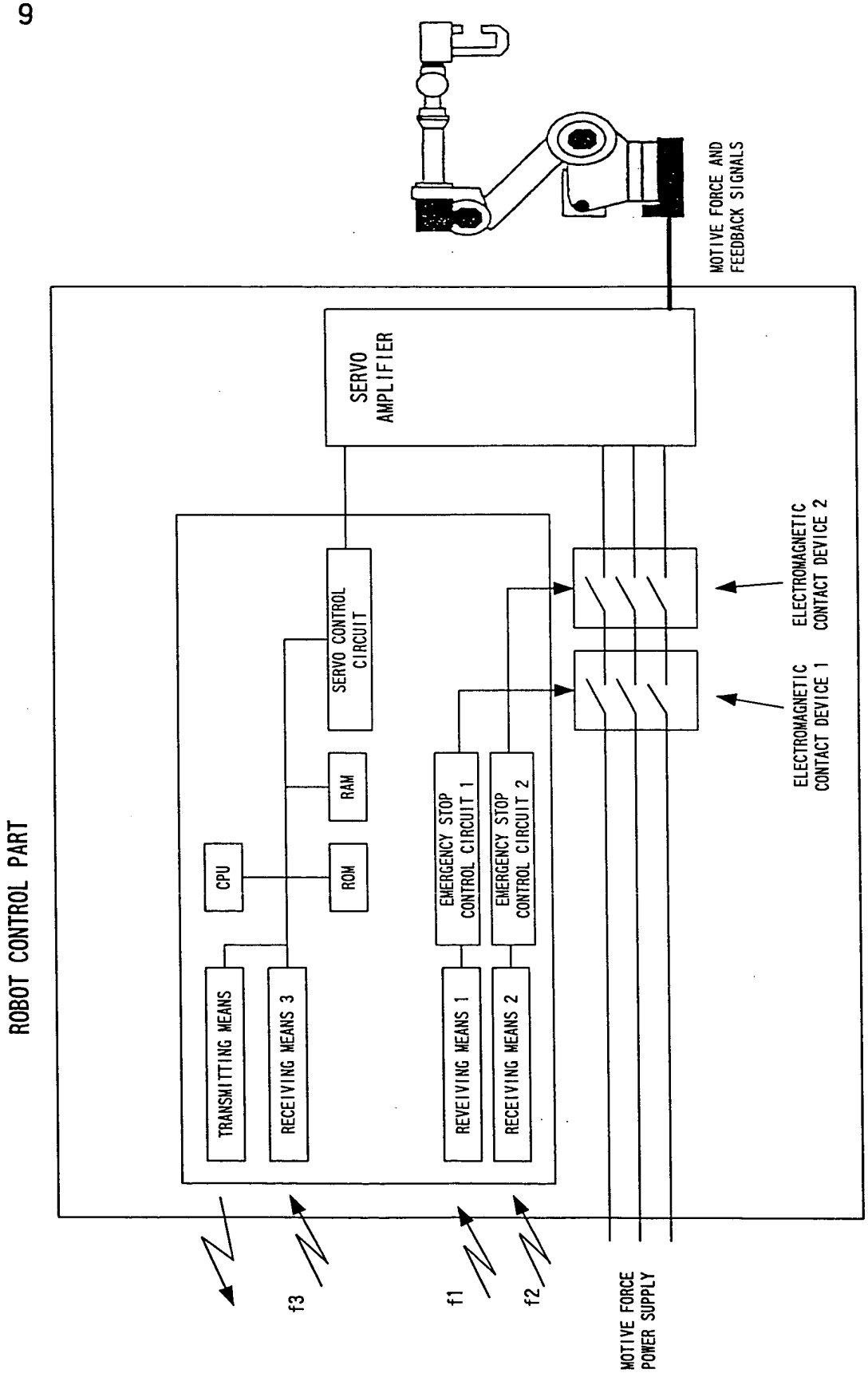

ROBOT CONTROL PART
SERVO AMPLIFIER
MOTIVE FORCE AND FEEDBACK SIGNALS
SERVO CONTROL CIRCUIT
CPU
RAM
ROM
TRANSMITTING MEANS
RECEIVING MEANS 3
EMERGENCY STOP CONTROL CIRCUIT 1
EMERGENCY STOP CONTROL CIRCUIT 2
REVEIVING MEANS 1
RECEIVING MEANS 2
ELECTROMAGNETIC CONTACT DEVICE 2
ELECTROMAGNETIC CONTACT DEVICE 1
f3
f1
f2
MOTIVE FORCE POWER SUPPLY

FIG. 10

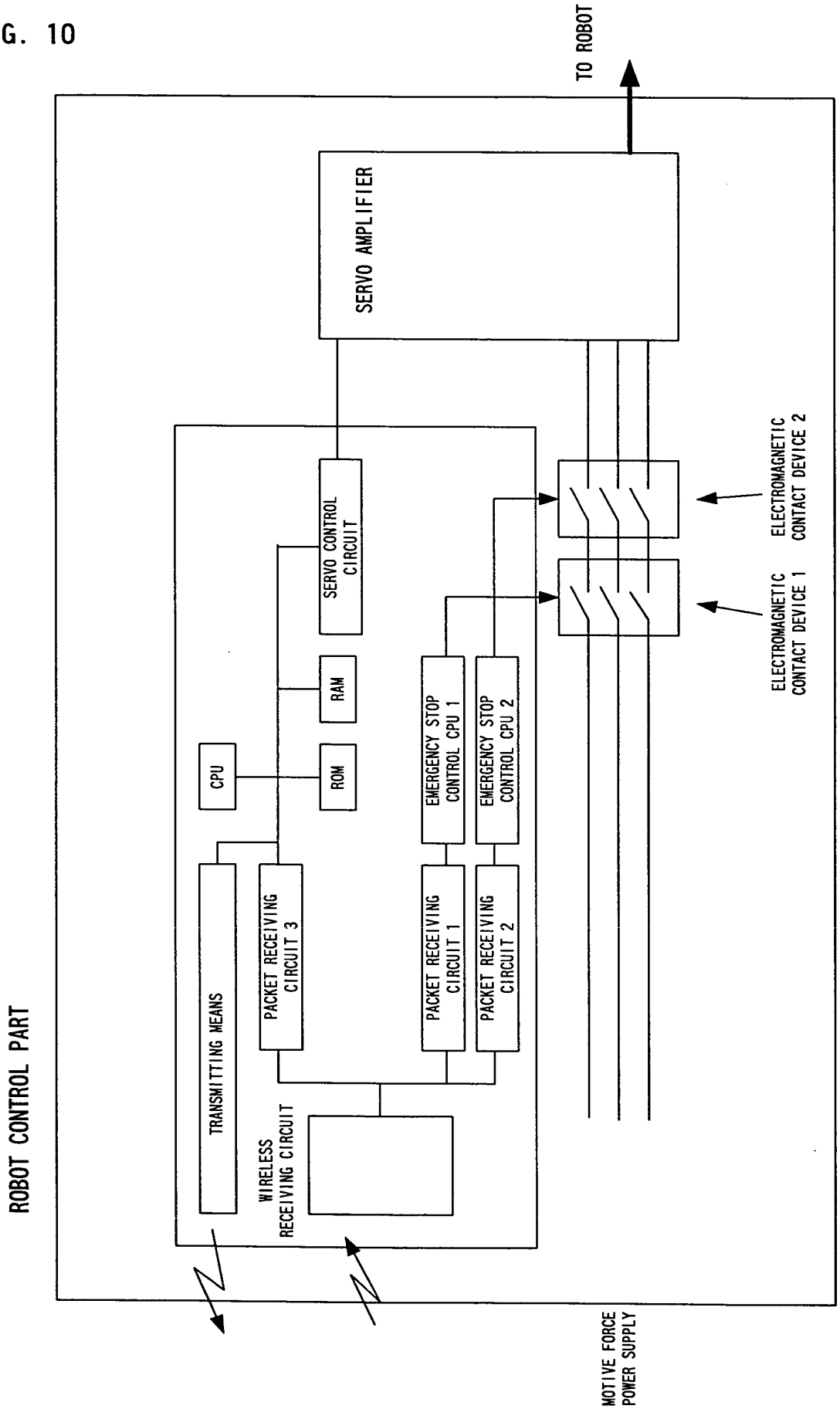

ROBOT CONTROL PART
TO ROBOT
SERVO AMPLIFIER
SERVO CONTROL CIRCUIT
RAM
ROM
CPU
EMERGENCY STOP CONTROL CPU 1
EMERGENCY STOP CONTROL CPU 2
PACKET RECEIVING CIRCUIT 3
PACKET RECEIVING CIRCUIT 1
PACKET RECEIVING CIRCUIT 2
TRANSMITTING MEANS
WIRELESS RECEIVING CIRCUIT
ELECTROMAGNETIC CONTACT DEVICE 1
ELECTROMAGNETIC CONTACT DEVICE 2
MOTIVE FORCE POWER SUPPLY

FIG. 11

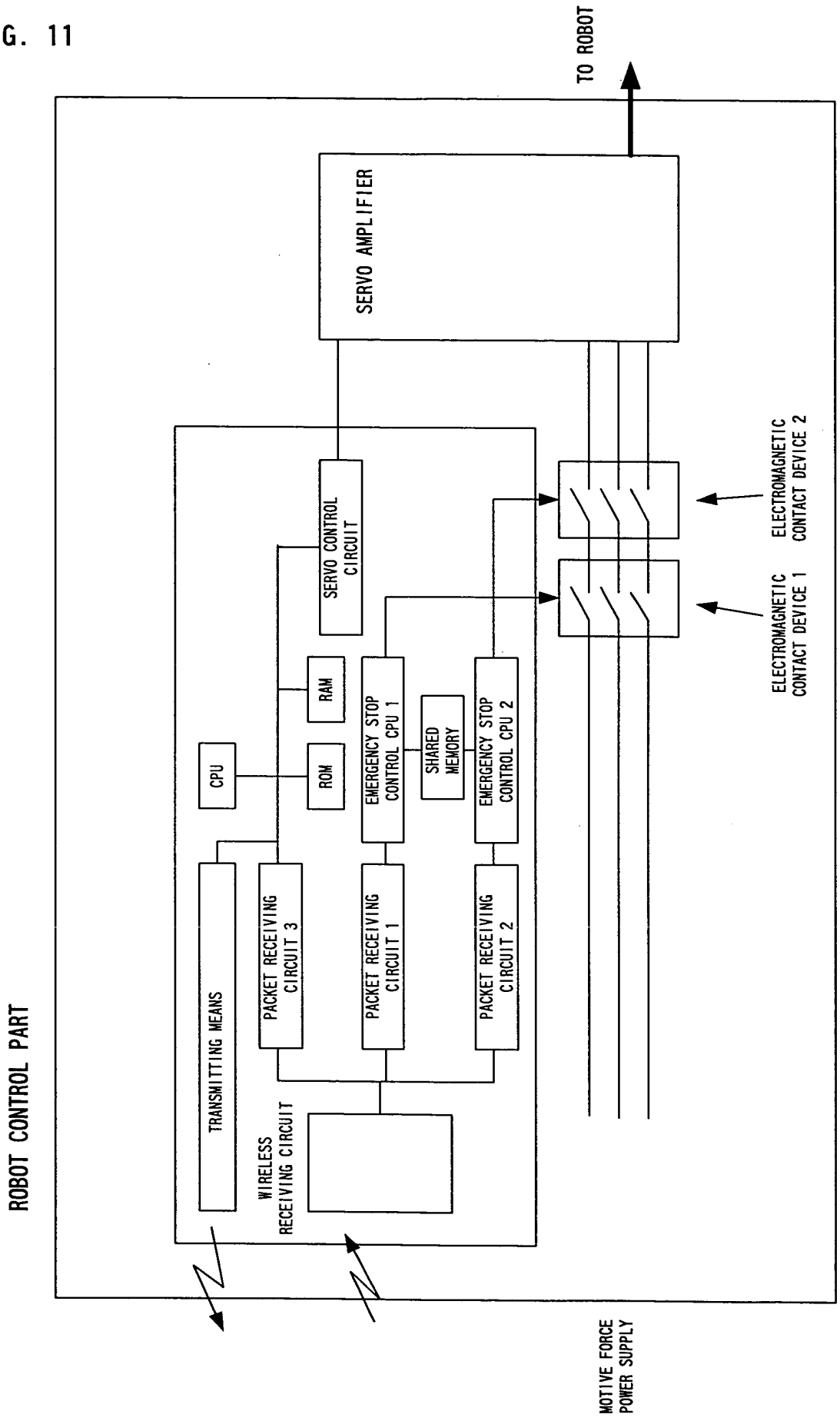
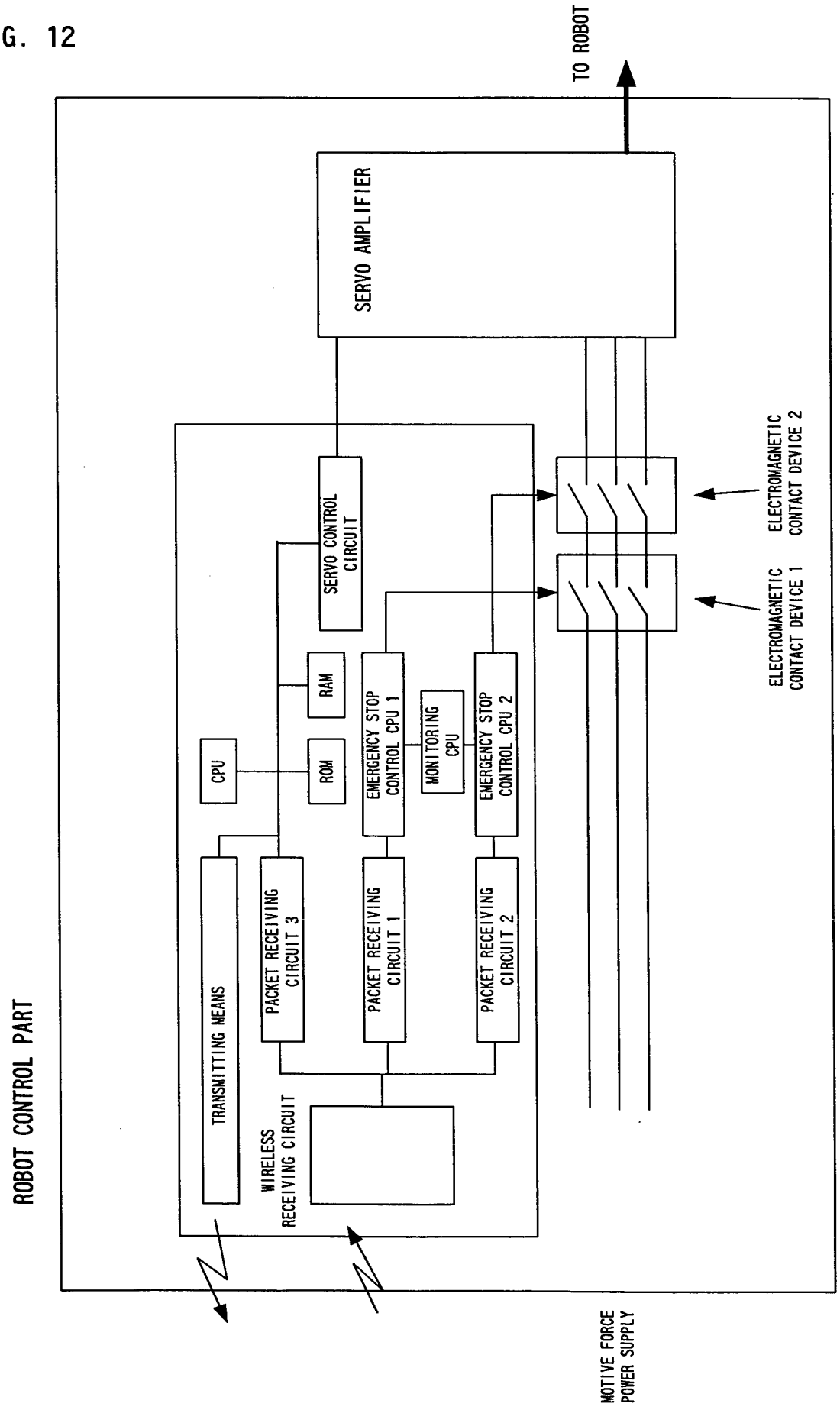

ROBOT CONTROL PART
TO ROBOT
SERVO AMPLIFIER
SERVO CONTROL CIRCUIT
ELECTROMAGNETIC CONTACT DEVICE 2
ELECTROMAGNETIC CONTACT DEVICE 1
RAM
ROM
CPU
EMERGENCY STOP CONTROL CPU 1
SHARED MEMORY
EMERGENCY STOP CONTROL CPU 2
TRANSMITTING MEANS
PACKET RECEIVING CIRCUIT 3
PACKET RECEIVING CIRCUIT 1
PACKET RECEIVING CIRCUIT 2
WIRELESS RECEIVING CIRCUIT
MOTIVE FORCE POWER SUPPLY

FIG. 12


ROBOT CONTROL PART
TO ROBOT
SERVO AMPLIFIER
SERVO CONTROL CIRCUIT
ELECTROMAGNETIC CONTACT DEVICE 2
ELECTROMAGNETIC CONTACT DEVICE 1
RAM
ROM
CPU
EMERGENCY STOP CONTROL CPU 1
MONITORING CPU
EMERGENCY STOP CONTROL CPU 2
TRANSMITTING MEANS
PACKET RECEIVING CIRCUIT 3
PACKET RECEIVING CIRCUIT 1
PACKET RECEIVING CIRCUIT 2
WIRELESS RECEIVING CIRCUIT
MOTIVE FORCE POWER SUPPLY